Serum level of procalcitonin in patient with active pulmonary tuberculosis and compare with control group

Introduction: *About one third of the world's population is infected with tuberculosis (TB) and each year, about 1.5 to 2 million people die from TB. Procalcitonin (PCT) is an inflammatory marker that its level has variable results. The aim of this study was to compare serum PCT before and after treatment in patients with pulmonary TB.*

Methods: *This was a case-control study that has been done on patients with pulmonary TB. Data were collected by check list and serum samples were taken for laboratory analysis at the beginning and after six months of treatment and analyzed by SPSS.16 software.*

Results: *Forty-two patients with active pulmonary TB entered in this study. The mean age of the patients was 45.48 ± 12.54 years and 54.8% of them were male. Most of the patients (59.5 %) were rural. There was a family history of TB in 26% of patients. The most common symptom (45.2%) was cough. The mean ESR and CRP before treatment were 45.88 ± 21.87 and 7.16 ± 3.98 respectively that were reduced statistically significant after treatment (P<0.001). Neutrophil counts before treatment was 6221 ± 3161 Cells per ml. and decreased statistically significant after treatment (P=0.01). Mean PCT prior to treatment was 1.25 ± 0.98 ng/ml. and 81% of the patients have PCT higher than 0.5 to 5. After treatment PCT level reduced significantly (P<0.001).*

Conclusion: *Our results showed that the PCT levels in pulmonary TB were high in active disease and may be used for follow-up as a discriminative marker between active and cured pulmonary TB and predict treatment response.*

Keywords: *Pulmonary tuberculosis, Procalcitonin, inflammatory marker*